WHAT IS CLAIMED IS:

1. A method for treating disorders regulated at neuronal nicotinic acetylcholine receptors (nAChRs) which comprises administering to a patient in need of such treatment a therapeutically effective amount of an α-conotoxin peptide having the general formula

Xaa_1-Xaa_2-Cys-Cys-Xaa_3-Xaa_4-Pro-Xaa_5-Cys-Xaa_6-Xaa_7-Xaa_8-Xaa_9-Xaa_{10}-Xaa_{11}-Xaa_{12}-Cys (SEQ ID NO:1)

wherein Xaa_1 is des-Xaa_1, Tyr, mono-iodo-Tyr or di-iodo-Tyr, Xaa_2 is any amino acid, Xaa_3 is any amino acid, Xaa_4 is any amino acid, Xaa_5 is any amino acid; Xaa_6 is any amino acid, Xaa_7 is any amino acid, Xaa_8 is any amino acid, Xaa_9 is des-Xaa_9 or any amino acid, Xaa_{10} is des-Xaa_{10} or any amino acid, Xaa_{11} is des-Xaa_{11} or any amino acid and Xaa_{12} is des-Xaa_{12} or any amino acid or a pharmaceutically acceptable salt thereof, with the proviso that when the disorder is small cell lung carcinoma, then the α-conotoxin peptide is not a peptide having an amino acid sequence set forth in SEQ ID NO:2 or SEQ ID NO:13.

2. The method of claim 1, wherein Xaa_1 is Tyr, mono-iodo-Tyr or di-iodo-Tyr.

3. The method of claim 1, wherein said disorder is a cardiovascular disorder.

4. The method of claim 1, wherein said disorder is a gastric motility disorder.

5. The method of claim 1, wherein said disorder is urinary incontinence.

6. The method of claim 1, wherein said disorder is nicotine addiction.

7. The method of claim 1, wherein said disorder is a mood disorder.

8. The method of claim 1, wherein said disorder is small cell lung carcinoma.

9. The method of claim 1, wherein said nAChR is an α3β2-containing nAChR.

10. The method of claim 1, wherein said nAChR is an α3β4-containing nAChR.

11. The method of claim 1, wherein said nAChR is an α7-containing nAChR.

12. The method of claim 1, wherein said α-conotoxin peptide is selected from the group consisting of:
Gly-Cys-Cys-Ser-Leu-Pro-Pro-Cys-Ala-Ala-Ser-Asn-Pro-Asp-Tyr-Cys (SEQ ID NO:11);
Tyr-Gly-Cys-Cys-Ser-Asn-Pro-Val-Cys-His-Leu-Glu-His-Ser-Asn-Leu-Cys (SEQ ID NO:3); and
Gly-Cys-Cys-Ser-Asn-Pro-Val-Cys-Phe-Ala-Thr-His-Ser-Asn-Leu-Cys (SEQ ID NO:4).

13. The method of claim 12, wherein at least one of the Pro residues is replaced with hydroxyproline.

14. The method of claim 12, wherein a Tyr residue is incorporated on the N-terminus.

15. The method of claim 14, wherein the Tyr residue is substituted with one or two iodines.

16. The method of claim 1, wherein said α-conotoxin peptide has the formula Xaa-peptide, wherein Xaa is Tyr, mono-iodo-Tyr or di-iodo-Tyr and peptide is selected from the group consisting of (a) a peptide having the amino acid sequence set forth in SEQ ID NO:5, (b) a peptide having the amino acid sequence set forth in SEQ ID NO:7, (c) a peptide having the amino acid sequence set forth in SEQ ID NO:8, (d) a peptide having the amino acid sequence set forth in SEQ ID NO:9, (e) a peptide having the amino acid sequence set forth in SEQ ID NO:12 and (f) a peptide having the amino acid sequence set forth in SEQ ID NO:13.

17. The method of claim 16, wherein at least one of the Pro residues in the peptide is replaced with hydroxyproline.

18. The method of claim 16, wherein a Trp residue in the peptide is replaced with bromotryptophan.